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BLUEBERRY TIME

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A radio discussion by Miss Ruth Van Deman, Bureau of Home Economics, and Dr. Frederick V. Coville and W. R. Beattie, Bureau of Plant Industry, and Agriculture in the Department of Agriculture period of the National Farm and Home Hour, broadcast by a network of 50 associate NBC stations, Tuesday, July 17, 1934.

ANNOUNCER: Today Miss Ruth Van Deman and Mr. Beattie have combined the household and garden calendar periods. They have as their guest Dr. Frederick V. Coville, the botanist, who has made himself famous as the blueberry specialist of the Department of Agriculture. Doctor Coville is responsible, as many of you perhaps know, for taming the wild blueberry and for the development of those wonderful big blueberries you see on the market nowadays.

Miss Van Deman, you look as though you had a thousand questions to ask Doctor Coville.

MISS VAN DEMAN: Yes, I have. Being a woman I don't have to cover up my curiosity the way you and Mr. Beattie do.

Dr. Coville, I want to know what started you off as a blueberry tamer?

DR. COVILLE: Well, Miss Van Deman, my interest in blueberries started when I bought an old farm up in New Hampshire. It had a pasture filled with wild blueberries, both the lowbush and the highbush. Anybody of course couldn't help noticing the difference in the flavor and the size of the berries. That was back about 1906, and I soon began growing blueberry seedlings.

MISS VAN DEMAN: What did your New Hampshire neighbors think of that? A little skeptical, weren't they?

DR. COVILLE: They certainly were. But how did you guess it?

MISS VAN DEMAN: Oh, I'm another one who's spend summers up in New Hampshire I'm well acquainted with the rock-ribbed conservatism of that grand old State. But don't let me stop your story, Dr. Coville.

DR. COVILLE: Well, my New Hampshire neighbors certainly warned me that I'd never domesticate the blueberry. It was a wild thing, and nature meant it to stay wild. And I discovered that they were partly right. For blueberry plants die in ordinary fertile garden soil. It was two years before I found that the blueberry requires a strongly acid soil and that it thrives best in a soil consisting mainly of a mixture of peat and sand.

MR. BEATTIE: And Dr. Coville, in your blueberry experiments didn't you also find that mountain laurel, and rhododendrons, azaleas, heather, and trailing arbutus are acid soil plants?

DR. COVILLE: Yes.

MR. BEATTIE: Did you find the reason why blueberries need this acid soil?

(over)

DR. COVILLE: Yes, we found that every healthy blueberry plant has on its roots a minute fungus, visible only under a powerful microscope. This root fungus seems to supply the blueberry bush with nitrogenous food. At any rate, the blueberry appears unable to nourish itself properly without the aid of the fungus.

MR. TEUTON: Dr. Coville, May I interrupt you with a question?

DR. COVILLE: Certainly, Mr. Teuton.

MR. TEUTON: Down in Tennessee we have what we call huckleberries. I lived on 'em every summer when I was a boy. Is the huckleberry kin to the blueberry?

DR. COVILLE: Yes, first cousin. I've been wondering how soon that question would come up. It always does sooner or later.

MR. TEUTON: Is there any way of telling blueberries from huckleberries?

DR. COVILLE: Yes, if you cut a huckleberry crosswise through the middle you will find ten large seeds set in a clearly defined ring. Each of these seeds has a bony shell, like a peach pit only smaller. These shells crackle between your teeth when you eat huckleberries. The blueberry has many seeds. Any where from twenty to forty, but they do not have a bony shell and they are so small that the berries are commonly supposed to be seedless. In the South and West blueberries and huckleberries are often confused under the one name huckleberry, but here in the Department of Agriculture we use the name blueberry for our new varieties which seem almost seedless.

MR. BEATTIE: Dr. Coville, tell us a little bit about your experiments that produced the varieties of large luscious blueberries from the little wild fellows.

DR. COVILLE: Well, it was a long series of experiments in plant breeding covering now almost 30 years. The breeding of blueberries is intimately connected with the number of their chromosomes.

MISS VAN DEMAN: Now, you're getting pretty technical, Dr. Coville. Remember it's some time since we studied about chromosomes in botany class.

DR. COVILLE: Well you probably remember that chromosomes were defined as the minute bodies that carry the special characteristics inherited by a seedling from its parents. Chromosomes occur in every cell of the blueberry plant, from root to leaf. Some of the species of wild blueberry have twenty-four chromosomes. Others have twelve. I've never been able to cross the twelve-chromosome species with the twenty-four-chromosome species, but I've had no trouble in crossing the twenty-four-chromosome species with each other.

The lowbush blueberry and the highbush blueberry of the northeastern United States have twenty-four chromosomes. We began the breeding in 1911 with selected wild plants of these two species. Since then we have grown more than sixty thousand pedigreed seedlings.

MR. BEATTIE: Sixty thousand! And how many named varieties have you selected out of these sixty thousand seedlings?

DR. COVILLE: Only twelve. That is, we've chosen only one out of every five thousand as worthy of naming and recommending to blueberry growers. We've rejected hundreds of plants that bore berries as large as three-fourths of an inch in diameter, simply because the berries were not up to the standard we set for flavor.

MR. BEATTIE: So you've bread for flavor as well as size, have you?

DR. COVILLE: Yes, very decidedly. Last year one of our seedlings produced berries over an inch in diameter, that's larger than a silver quarter, but the flavor was unsatisfactory. Now we are crossing this plant with some of our best-flavored varieties, in the hope of getting a one-inch blueberry with a first-class flavor. Only last week I rejected two otherwise excellent hybrids because they had the flavor of a red raspberry ^{instead} of a blueberry. Here's a very large berry we rejected because it was too sour. Try it, Mr. Teuton.

MR. TEUTON: My, that is sour.

MR. BEATTIE: Dr. Coville, do you find that people's tastes in blueberries differ very greatly?

DR. COVILLE: Oh yes, it's the same with blueberries as with other fruits. You may prefer a very tart berry that requires sugar if you're going to eat it with cream. As for myself, I like a very sweet berry, without acidity when fully ripe. The variety named Pioneer is that type of sweet blueberry. I'm sorry I couldn't bring some along, but Pioneer is out of season now.

MISS VAN DEMAN: Well, what's this one, Dr. Coville?

DR. COVILLE: That's Katherine. Take one. Have more if you like but I want you to taste them all.

MISS VAN DEMAN: Um m. That has the real blueberry flavor. It makes me think of the north woods.

DR. COVILLE: You're quite right. That flavor came from a wild blueberry from Greenfield, New Hampshire. Well, here's Stanley, another sweet variety. And here's Concord. We named it Concord because the berries grow in large clusters like bunches of Concord grapes.

MR. BEATTIE : What kind of flavor has concord?

DR. COVILLE: It's too sour for most tastes until it is dead ripe. Then it is mildly acid and its flavor is delicious. Try one.

MR. BEATTIE: That suits me.

DR. COVILLE: Here's Jersey. All its ancestry came from New Jersey, that's why we named it Jersey. It's a very late and very large variety. Sometimes

the berries are seven-eighths of an inch in diameter.

MR. BEATTIE: I'd say it's a little too acid, unless you get one that's dead ripe.

MISS VAN DEMAN: Well, Dr. Coville, you've certainly taught me that there's as much difference in the flavor of blueberries as there is in apples. Where have you carried on most of these blueberry experiments?

DR. COVILLE: The seedlings we've grown right here in Washington in the Government greenhouses. The field tests we've carried on mainly in the pine barrens of New Jersey, in places where the soil is sandy and very peaty and acid.

MR. BEATTIE: Pardon me for interrupting you, Dr. Coville, but about how large do your hybrid blueberry bushes grow?

DR. COVILLE: Some of them grow as tall as seven feet. Our improved varieties were bred chiefly from the highbush blueberry. Other varieties, especially those containing a quarter-strain of the lowbush blueberry are about four or five feet high. We grow these cultivated blueberries in rows eight feet apart, and four feet apart in the row.

MR. BEATTIE: Whew. Those certainly are big blueberry bushes. How long do they live?

DR. COVILLE: Oh, they may live for a hundred years; we don't really know. If the tops are cut off or burned off, the roots will send up shoots and form a new plant. Blueberries require clean culture, acid fertilizers, and careful pruning every year. When we first started the work we thought that the plants would produce a paying crop in 5 to 10 years. But we weren't optimistic enough; we find that many of the varieties produce a fair crop the third year and a better crop the fourth year.

MISS VAN DEMAN: Dr. Coville, I have an interesting side light for you on the difference between highbush and the lowbush blueberries. Did you know that the highbush kind is a better source of vitamin C than the lowbush?

DR. COVILLE: No, I confess I haven't followed the vitamin studies on blueberries. I'm glad to know that.

MISS VAN DEMAN: Well, since your cultivated varieties came chiefly from the highbush types that's one more thing in their favor. For vitamin C, you know, is one of the most elusive of the vitamins and one we need a constant supply of to keep our teeth and gums healthy.

DR. COVILLE: Are there any other special dietetic virtues in blueberries, Miss Van Deman?

MISS VAN DEMAN: Yes, they contain a little iron, but only a trace. And, of course, like all fruits they add bulk to the diet, and help to keep the digestive tract in good condition.

When I was checking up with Doctor Munsell on the vitamins she said "Well, vitamins or no vitamins, here's what I think about blueberries. For supper on a hot summer evening, there's nothing like a big bowl of cold blueberries with a pitcher of cold milk beside them and a place of nice crisp crackers."

MR. TEUTON: And how about huckleberry, pardon me, blueberry pie, Miss Van Deman?

MISS VAN DEMAN: Yes, blueberry pie and blueberry shortcake are mighty good. So are blueberry muffins. But the best blueberry concoction I know anything about is a pudding served at a famous old hotel up in New Hampshire, right at the foot of Mt. Monadnock where acres and acres of blueberries grow wild. For years the recipe for this blueberry pudding was a guarded secret, but the hotel changed hands recently and the new owner is a generous person who shares all her good things with everybody who comes. She gave me the recipe. The beauty of this pudding is that it's as easy to make as it is delicious to eat.

MR. TEUTON: Miss Van Deman, cooking isn't exactly in my line but you certainly got me interested. Tell us more about that pudding.

MISS VAN DEMAN: Well, you combine your blueberries with sugar -- about a cup of sugar to a quart of berries. Add a little water and put the berries on the stove to heat. When they've simmered for about 5 minutes, add 2 cups of soft bread-crumbs mixed with enough melted butter to season -- about 2 tablespoonfuls of butter. Then let the pudding stand on the back of the stove for about 1/2 hour. This gives the bread crumbs and the berries a chance to blend and develop a delicious, rich flavor. Serve the pudding warm with plain cream or whipped cream, whichever you prefer. If the pudding doesn't seem tart enough add a little lemon juice just before you send it to the table.

DR. COVILLE: Miss Van Deman, you've told me something else I didn't know about blueberries. That pudding sounds delicious. And here's a bargain. I'll furnish the blueberries anytime you'll make the pudding.

MISS VAN DEMAN: All right, Dr. Coville, I'll certainly agree to that.

DR. COVILLE: And I don't believe we'll have to look very far for judges.

MR. BEATTIE: No, indeed, I'll offer my services right now.

MR. TEUTON: And I do, too, Thank you, Miss Van Deman, and Dr. Coville, and Mr. Beattie, for this interesting talk about blueberries. And, Miss Van Deman, the next time I go back to Tennessee I'm going to tell my folks about your huckle--, oh I mean your blueberry pudding.

